

TUNING ELECTRODES USED IN A REACTOR FOR
ELECTROCHEMICALLY PROCESSING A MICROELECTRONIC
WORKPIECE

ABSTRACT

A facility for selecting and refining electrical parameters for processing a microelectronic workpiece in a processing chamber is described. The facility initially configures the electrical parameters in accordance with either a mathematical model of the processing chamber or experimental data derived from operating the actual processing chamber. After a workpiece is processed with the initial parameter configuration, the results are measured and a sensitivity matrix based upon the mathematical model of the processing chamber is used to select new parameters that correct for any deficiencies measured in the processing of the first workpiece. These parameters are then used in processing a second workpiece, which may be similarly measured, and the results used to further refine the parameters. In some embodiments, the facility analyzes a profile of the seed layer applied to a workpiece, and determines and communicates to a material deposition tool a set of control parameters designed to deposit material on the workpiece in a manner that compensates for deficiencies in the seed layer.